|  |
| --- |
| Use the Van de Walle text and the TN Math Standards to complete this assignment. If other resources are used in addition, please cite with the URL or bibliographic information. |

**Chapter 10**

1. Basic facts for:
   1. addition and multiplication are
   2. subtraction and division are
2. The Four Elements of Basic Fact Fluency include: Appropriate strategy selection, flexibility, efficiency, & accuracy. Download, print out, and skim the following article “Assessing Basic Fact Fluency”

<http://www.uen.org/utahstandardsacademy/math/downloads/level-2/3-4-4-assessingbasicfactfluency.pdf>

Fill in the following Chart.

|  |  |  |
| --- | --- | --- |
| **Element of Fluency** | **What Does it Mean?** | *Select* & **bold** one of the following *assessment strategies*: interviews, observations, journaling, or quizzes. Describe how the strategy can be used to *address each element of fluency*. |
| Appropriate strategy selection |  |  |
| Flexibility |  |  |
| Efficiency |  |  |
| Accuracy |  |  |

1. Summarize the 3 phases of learning math facts detailed on page 195.

|  |  |
| --- | --- |
| Phase 1: Counting Strategies |  |
| Phase 2: Reasoning Strategies |  |
| Phase 3: Mastery |  |

1. What are the pros and cons of the following approaches to teaching basic facts?

|  |  |  |
| --- | --- | --- |
|  | **Pros** | **Cons** |
| **Memorization** |  |  |
| **Explicit Strategy Instruction** |  |  |
| **Guided Invention** |  |  |

**Reasoning Strategies for Addition Facts**

1. Watch the embedded video from the digital text on page 200. What is the only addition fact that does not have an assigned reasoning strategy?
2. There are **seven addition fact reasoning strategies** listed on pages 200-205. Read through all of the them. List each below and **choose one** to describe and give an example.

**Reasoning Strategies for Subtraction Facts**

1. Reasoning strategies for subtraction facts

|  |  |
| --- | --- |
|  | Description with Example |
| Think Addition |  |
| Down Under 10 |  |
| Take From 10 |  |

**Reasoning Strategies for Multiplication and Division**

1. Which property of multiplication cuts the basic facts for memorization in half? Explain why.
2. Reasoning strategies for multiplication and division facts

|  |  |
| --- | --- |
|  | Description with Example |
| 0s |  |
| 1s |  |
| 2s |  |
| 5s |  |
| Nifty Nines |  |

1. Derived strategies for multiplication and division facts

|  |  |
| --- | --- |
|  | Description with Example |
| Arrays |  |
| Doubling |  |
| Close Facts |  |

**Reinforcing Basic Fact Mastery**

1. How do math games increase student achievement?
2. Look at Figure 10.17 on p. 218: Websites and applets for support in teaching the basic facts. Explore at least 1 of the listed websites and describe your experience. (Do a Google search to find the resource!)
3. Fact remediation

|  |  |
| --- | --- |
|  | Description |
| Explicitly teach reasoning strategies |  |
| Provide hope |  |
| Inventory the known and unknown facts |  |
| Build in success |  |
| Provide engaging activities |  |

1. Describe:
   1. One recommendation from both the “What to Do When Teaching Basic Facts” (p. 219) and
   2. “What Not to Do When Teaching Basic Facts” (p. 220).